INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

To: Interested Parties

Date: June 19, 2014

From: Matthew Stuckey, Chief
Permits Branch
Office of Air Quality

Source Name: Superior Manufacturing, Inc.

Permit Level: Registration

Permit Number: 173-34520-00113

Source Location: 11333 Elberfeld Road, Elberfeld, Indiana

Type of Action Taken: Initial Permit

Notice of Decision: Approval - Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the matter referenced above.

The final decision is available on the IDEM website at: http://www.in.gov/apps/idem/caats/
To view the document, select Search option 3, then enter permit 34520.

If you would like to request a paper copy of the permit document, please contact IDEM's central file room:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

Pursuant to IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

(continues on next page)

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

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REGISTRATION
OFFICE OF AIR QUALITY

Superior Manufacturing, Inc.
11333 Elberfeld Rd.
Elberfeld, Indiana 47613

Pursuant to 326 IAC 2-5.1 (Construction of New Sources: Registrations) and 326 IAC 2-5.5 (Registrations), (herein known as the Registrant) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this registration.

Registration No. 173-34520-00113	
Issued by: Jenny Acker, Section Chief Permits Branch Office of Air Quality	Issuance Date: June 19, 2014

SECTION A SOURCE SUMMARY

This registration is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Registrant should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Registrant to obtain additional permits pursuant to 326 IAC 2.

A.1 General Information

The Registrant owns and operates a stationary truck trailer manufacturing source.

Source Address:	11333 Elberfeld Rd., Elberfeld, IN 47613
General Source Phone Number:	(812) 983-9900
SIC Code:	3715
County Location:	Warrick County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Registration

A.2 Emission Units and Pollution Control Equipment Summary

This stationary source consists of the following emission units and pollution control devices:

(a) Three (3) natural gas-fired space heaters, identified as SH1, SH2, and SH3, constructed in 2004, with a maximum heat input capacity of 0.138 MMBtu/hr, each, and exhausting to stacks SH1-3.

(b) Two (2) natural gas-fired space heaters, identified as SH4 and SH5, constructed in 2013, with a maximum heat input capacity of 0.268 MMBtu/hr, each, and exhausting to stacks SH4-5.

(c) One (1) welding and cutting operation, identified as MW1, constructed in 2004, consisting of the following:

(1) Ten (10) metal inert gas (MIG) welding units for steel, with a maximum capacity of 0.48 pounds of wire per hour, each, using no control equipment, and exhausting indoors.

(2) One (1) metal inert gas (MIG) welding unit for aluminum, with a maximum capacity of 0.48 pound of wire per hour, using no control equipment, and exhausting indoors.

(3) Four (4) plasma cutters, with a maximum capacity of twenty four (24) inches of metal one quarter (0.25) inch thick per minute, each, using no control equipment, and exhausting indoors.

(d) One (1) abrasive blasting operation, identified as SB1, constructed in 2013, with a maximum capacity of 35.34 pounds of crushed glass abrasive per hour, using no control equipment, occurring inside a domed structure with both ends open.

(e) One (1) spray coating operation, identified as SP1, constructed in 2004, with a maximum capacity of one (1) trailer per 19.5 hours, using dry filters as control, and exhausting to stack SP1.

(f) Paved and unpaved roads

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

Terms in this registration shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

B.2 Effective Date of Registration [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this registration is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

B.3 Registration Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation), this registration to operate may be revoked for any of the following causes:

(a) Violation of any conditions of this registration.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this registration.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this registration shall not require revocation of this registration.

(d) For any cause which establishes in the judgment of IDEM the fact that continuance of this registration is not consistent with purposes of this article.

B.4 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to Registration No. 173-34520-00113 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this registration.

B.5 Annual Notification [326 IAC 2-5.1-2(f)(3)] [326 IAC 2-5.5-4(a)(3)]

Pursuant to 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3):

(a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this registration.

(b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003

Indianapolis, IN 46204-2251

(c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

B.6 Source Modification Requirement [326 IAC 2-5.5-6(a)]

Pursuant to 326 IAC 2-5.5-6(a), an application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

B.7 Registrations [326 IAC 2-5.1-2(i)]

Pursuant to 326 IAC 2-5.1-2(i), this registration does not limit the source's potential to emit.

B.8 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this registration, the Registrant shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this registration or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Registrant's control, the PMPs cannot be prepared and maintained within the above time frame, the Registrant may extend the date an additional ninety (90) days provided the Registrant notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The Registrant shall implement the PMPs.

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Registrant to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.

(c) To the extent the Registrant is required by 40 CFR Part 60 or 40 CFR Part 63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such OMM Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

C.1 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this registration:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.2 Fugitive Dust Emissions [326 IAC 6-4]

The Registrant shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)]

C.3 General Record Keeping Requirements [326 IAC 2-5.1-3(e)(2)]

(a) Records of all required monitoring data, reports and support information required by this registration shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Registrant, the Registrant shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this registration, for all record keeping requirements not already legally required, the Registrant shall be allowed up to ninety (90) days from the date of registration issuance or the date of initial start-up, whichever is later, to begin such record keeping.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Three (3) natural gas-fired space heaters, identified as SH1, SH2, and SH3, constructed in 2004, with a maximum heat input capacity of 0.138 MMBtu/hr, each, using no controls, and exhausting to stacks SH1-3.

(b) Two (2) natural gas-fired space heaters, identified as SH4 and SH5, constructed in 2013, with a maximum heat input capacity of 0.268 MMBtu/hr, each, using no controls, and exhausting to stacks SH4-5.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

D.1.1 Particulate Emissions Limitation [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from each space heater shall be limited to 0.6 pounds per MMBtu heat input.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(d) One (1) abrasive blasting operation, identified as SB1, constructed in 2013, with a maximum capacity of 35.34 pounds of crushed glass abrasive per hour, using no control equipment, occurring inside a domed structure with both ends open.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

D.2.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacture Processes), the allowable particulate emission rate from the abrasive blasting process shall be limited to 8.83 pounds per hour when operating, based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(e) One (1) spray coating operation, identified as SP1, constructed in 2004, with a maximum capacity of one (1) trailer per 19.5 hours, using dry filters as control, and exhausting to stack SP1.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9, the Registrant shall not allow the discharge into the atmosphere VOC in excess of three and five-tenths (3.5), pounds of VOC per gallon of coating, excluding water, as delivered to the applicator.

D.3.2 Volatile Organic Compounds (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9(f), work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include, but not limited to, the following:

(a) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.

(b) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.

(c) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.

(d) Convey VOC containing coatings, thinners, coating related waste, and cleaning materials from one (1) location to another in closed containers or pipes.

(e) Minimize VOC emissions from the cleaning application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

D.3.3 Particulate [326 IAC 6-3-2(d)]

(a) Particulate from surface coating operation SP1 shall be controlled by a dry particulate filter, and the Registrant shall operate the control device in accordance with manufacturer's specifications.

(b) If overspray is visibly detected at the exhaust or accumulates on the ground, the Registrant shall inspect the control device and do either of the following no later than four (4) hours after such observation:

(1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

(2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

(c) If overspray is visibly detected, the Registrant shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

D.3.4 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for these facilities and any control devices. Section B - Preventive Maintenance Plan contains the Registrant's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.3.5 Volatile Organic Compounds

When using non-compliant coatings, compliance with the VOC content limit in condition D.3.1 shall be determined pursuant to 326 IAC 8-1-2(a)(7), using a volume weighted average of coatings on a daily basis. This volume weighted average shall be determined by the following equation:

$$A = [\sum (c \times U) / \sum U]$$

Where:

A is the volume weighted average in pounds VOC per gallon less water as applied;

C is the VOC content of the coating in pounds VOC per gallon less water as applied; and

U is the usage rate of the coating in gallons per day.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

D.3.6 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.1, the Registrant shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.3.1. Records necessary to demonstrate compliance shall be available no later than 30 days after the end of each compliance period.

(1) The VOC content of each coating material and solvent used, less water.

(2) The amount of coating material and solvent less water used on a daily basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) The dates and times non-compliant coatings are used.

(4) During periods when non-compliant coatings are used:

(A) The volume weighted average VOC content of the coatings used for each day.

(b) Section C - General Record Keeping Requirements contains the Registrant's obligations with regard to the records required by this condition.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

REGISTRATION
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3).

Company Name:	Superior Manufacturing, Inc.
Address:	11333 Elberfeld Rd.
City:	Elberfeld, IN 47613
Phone Number:	(812) 983-9900
Registration No.:	173-34520-00113

I hereby certify that Superior Manufacturing, Inc. is :
- ☐ still in operation.
- ☐ no longer in operation.

I hereby certify that Superior Manufacturing, Inc. is :
- ☐ in compliance with the requirements of Registration No. 173-34520-00113.
- ☐ not in compliance with the requirements of Registration No. 173-34520-00113.

Authorized Individual (typed):
Title:
Signature:
Phone Number:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Registration

Source Description and Location

Source Name:	**Superior Manufacturing, Inc.**
Source Location:	**11333 Elberfeld Rd., Elberfeld, IN 47613**
County:	**Warrick**
SIC Code:	**3715**
Registration No.:	**R173-34520-00113**
Permit Reviewer:	**Doug Logan**

On May 12, 2014, the Office of Air Quality (OAQ) received an application from Superior Manufacturing, Inc. related to the construction and operation of a new truck trailer manufacturing source.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Warrick County.

Pollutant	Designation
SO_2	Cannot be classified.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.[1]
$PM_{2.5}$	Attainment effective October 27, 2011, for the annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

(a) Ozone Standards

Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Warrick County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$

Warrick County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Other Criteria Pollutants
Warrick County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

The fugitive emissions of criteria pollutants, hazardous air pollutants, and greenhouse gases are counted toward the determination of 326 IAC 2-5.1-2 (Registrations) applicability.

Background and Description of Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by Superior Manufacturing, Inc., on May 12, 2014, relating to registration of a dump trailer manufacturing operation.

Unregistered Emission Units and Pollution Control Equipment

The source consists of the following unregistered emission units:

(a) Three (3) natural gas-fired space heaters, identified as SH1, SH2, and SH3, constructed in 2004, with a maximum heat input capacity of 0.138 MMBtu/hr, each, using no controls, and exhausting to stacks SH1-3.

(b) Two (2) natural gas-fired space heaters, identified as SH4 and SH5, constructed in 2013, with a maximum heat input capacity of 0.268 MMBtu/hr, each, using no controls, and exhausting to stacks SH4-5.

(c) One (1) welding and cutting operation, identified as MW1, constructed in 2004, consisting of the following:

(1) Ten (10) metal inert gas (MIG) welding units for steel, with a maximum capacity of 0.48 pounds of wire per hour, each, using no control equipment, and exhausting indoors.

(2) One (1) metal inert gas (MIG) welding units for aluminum, with a maximum capacity of 0.48 pound of wire per hour, using no control equipment, and exhausting indoors.

(3) Four (4) plasma cutters, with a maximum capacity of twenty four (24) inches of metal one quarter (0.25) inch thick per minute, each, using no control equipment, and exhausting indoors.

(d) One (1) abrasive blasting operation, identified as SB1, constructed in 2013, with a maximum capacity of 35.34 pounds of crushed glass abrasive per hour, using no control equipment, occurring inside a domed structure with both ends open.

(e) One (1) spray coating operation, identified as SP1, constructed in 2004, with a maximum capacity of one (1) trailer per 19.5 hours, using dry filters as control, and exhausting to stack SP1.

(f) Paved and unpaved roads

Enforcement Issues

IDEM is aware that equipment has been constructed and/or operated prior to obtaining a registration. IDEM is reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the registration rules.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – Registration

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)									
	PM	PM10*	PM2.5*	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Single HAP (xylene)
Space Heaters	$7.75x10^{-3}$	$3.10x10^{-2}$	$3.10x10^{-2}$	$2.45x10^{-3}$	0.41	$2.24x10^{-2}$	0.34	492	$7.70x10^{-3}$	--
Welding and Cutting	0.29	0.29	0.29	--	--	--	--	--	$1.05x10^{-2}$	--
Abrasive Blasting	2.53	2.53	2.53	--	--	--	--	--	--	--
Surface Coating	10.87	10.87	10.87	--	--	12.12	--	--	10.31	5.28
Fugitive Emissions	$7.45x10^{-2}$	$1.97x10^{-2}$	$2.05x10^{-3}$	--	--	--	--	--	--	--
Total PTE of Entire Source	**13.78**	**13.75**	**13.73**	**$2.45x10^{-3}$**	**0.41**	**12.14**	**0.34**	**492**	**10.33**	**5.28**
Exemptions Levels**	< 5	< 5	< 5	< 10	< 10	< 10	< 25	< 100,000	< 25	<10
Registration Levels**	< 25	< 25	< 25	< 25	< 25	< 25	< 100	< 100,000	< 25	<10

negl. = negligible
*Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a regulated air pollutant".
**The 100,000 CO_2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

(a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of PM, PM10, PM2.5, and VOC are within the ranges listed in 326 IAC 2-5.1-2(a)(1). The PTE of all other regulated criteria pollutants are less than the ranges listed in 326 IAC 2-5.1-2(a)(1). Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2 (Registrations). A Registration will be issued.

(b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

(c) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) greenhouse gases (GHGs) is less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

(a) The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (326 IAC 12), are not included in the registration, since the space heaters are not steam generating units.

(b) The requirements of the New Source Performance Standard for Automobile and Light Duty Truck Surface Coating Operations, 40 CFR 60, Subpart MM (326 IAC 12), are not included in the registration, since the source is not an automobile or light duty truck assembly operation.

(c) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the registration.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(d) The requirements of the National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks (40 CFR 63.3080, Subpart IIII) (326 IAC 20-85), are not included in the registration, since this source does not coat bodies or body parts for automobiles, light trucks, or other motor vehicles.

(e) The requirements of the National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products (40 CFR 63.3880, Subpart MMMM) (326 IAC 20-80), are not included in the registration, since this source is not a major source of HAP emissions.

(f) The requirements of the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR 63.7480, Subpart DDDDD) (326 IAC 20-95), are not included in the registration, since this source is not a major source of HAP emissions.

(g) The requirements of the National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources (40 CFR 63.11169, Subpart CCCCCC are not included in the registration because the source:

(1) Does not perform paint stripping using methylene chloride.

(2) Does not perform spray application of coatings to motor vehicles or mobile equipment. Motor vehicle and mobile equipment surface coating means the spray application of coatings to assembled motor vehicles or mobile equipment. For the purposes of this subpart, it does not include the surface coating of motor vehicle or mobile equipment parts or subassemblies at a vehicle assembly plant or parts manufacturing plant. Therefore, this new truck trailer manufacturing source does not engage in the spray application of coatings to motor vehicles.

(3) Does not perform spray application of coatings that contain compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd) to a plastic or metal substrate on a part or product.

(h) The requirements of the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR 63.11193, Subpart JJJJJJ), are not included in the registration, since the space heaters are not boilers or process heaters.

(i) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the registration.

Compliance Assurance Monitoring (CAM)

(g) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the registration, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

(a) 326 IAC 2-5.1-2 (Registrations)
Registration applicability is discussed under the Permit Level Determination – Registration section above.

(b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.

(c) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

(d) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this registration:

(1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

(e) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-1(d), indirect heating facilities which received permit to construct after September 21, 1983 are subject to the requirements of 326 IAC 6-2-4.

The particulate matter emissions (Pt) shall be limited by the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu).

Q = Total source maximum operating capacity rating in MMBtu/hr heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation .

Pursuant to 326 IAC 6-2-4(a), for Q less than 10 MMBtu/hr, Pt shall not exceed 0.6 lb/MMBtu.

Indirect Heating Units Which Began Operation After September 21, 1983						
Facility	Construction Date	Operating Capacity (MMBtu/hr)	Q (MMBtu/hr)	Calculated Pt (lb/MMBtu)	Particulate Limitation, (Pt) (lb/MMBtu)	PM PTE based on AP-42 (lb/MMBtu)
SH1-3	2004	3 x 0.138	0.414	1.37	0.6	0.0019
SH4-5	2013	2 x 0.268	0.95	1.10	0.6	0.0019
Where: Q = Includes the capacity (MMBtu/hr) of the new unit(s) and the capacities for those unit(s) which were in operation at the source at the time the new unit(s) was constructed.						

(f) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

(1) Pursuant to 326 IAC 6-3-1(b)(9),welding operations are exempt from this rule because the operations consume less than six hundred twenty five (625) pounds of rod or wire per day.

(2) Pursuant to 326 IAC 6-3-1(b)(10), torch cutting operations are exempt from this rule because less than three thousand four hundred (3,400) inches per hour of stock one (1) inch thickness is cut.

(3) Pursuant to 326 IAC 6-3-2(d), surface coating shall be controlled by a dry particulate filter, subject to the following:

(A) The source shall operate the control device in accordance with manufacturer's specifications.

(B) If overspray is visibly detected at the exhaust or accumulates on the ground, the source shall inspect the control device and do either of the following no later than four (4) hours after such observation:

(i) Repair the control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
(ii) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

If overspray is visibly detected, the source shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

(8) Pursuant to 326 IAC 6-3-2(e), the allowable particulate emission rate from manufacturing processes shall not exceed the allowable emission rate for particulate as determined by the following formulas:

$$E = 4.10\ P^{0.67}$$

for process weight rates up to 60,000 lb/hr.

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Based on the information provided, the source used 35.34 lb of crushed glass media per hour, the average weight of a trailer is 12,500 lb, and blasting each trailer takes 2 hours. The process weight rate, P, is then:

P = [35.34 lb media/hr + (12,500 lb/trailer / 2 hr/trailer)] / 2,000 lb/ton
= 3.14 tons/hr

and E = 8.83 lb/hr

(g) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
The source is subject to the requirements of 326 IAC 6-4, because delivery vehicle traffic has the potential to emit fugitive particulate emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

(h) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.

(i) 326 IAC 8-1-6 (VOC Rules: New Facilities: General Reduction Requirements)
Pursuant to 326 IAC 8-1-6(1), the surface coating operations have potential emissions less than twenty-two and seven-tenths (22.7) megagrams (twenty-five (25) tons) per year, therefore 326 IAC 8-1-6 does not apply.

(j) 326 IAC 8-2-9 (VOC Rules: New Facilities: General Reduction Requirements)
Pursuant to 326 IAC 8-2-1(a)(4), the source is subect to 326 IAC 8-2-9 because construction of the source commenced after July 1, 1990, it coats metal parts under SIC code major group #37, and the source has emissions of greater than fifteen (15) pounds of VOC per day before add-on controls.

(1) Pursuant to 326 IAC 8-2-9(c), the Permittee shall not cause, allow, or permit the discharge into the atmosphere of any VOC in excess of the following:

(A) Forty-two hundredths (0.42) kilogram per liter (three and five-tenths (3.5) pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings. Extreme performance coatings are coatings designed for exposure to:

(i) temperatures consistently above ninety-five (95) degrees Celsius;
(ii) detergents;
(iii) abrasive or scouring agents;
(iv) solvents;
(v) corrosive atmospheres;
(vi) outdoor weather at all times; or
(vii) similar environmental conditions.

The Permittee shall comply with this limit using a daily volume weighted average pursuant to 326 IAC 8-1-2(a)(7).

(2) Pursuant to 326 IAC 8-2-9(f), work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include, but not limited to, the following:

(A) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.

(B) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.

(C) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.

(D) Convey VOC containing coatings, thinners, coating related waste, and cleaning materials from one (1) location to another in closed containers or pipes.

(E) Minimize VOC emissions from the cleaning application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

(i) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

(j) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on May 12, 2014.

The construction and operation of this source shall be subject to the conditions of the attached proposed Registration No. 173-34520-00113. The staff recommends to the Commissioner that this Registration be approved.

IDEM Contact

(a) Questions regarding this proposed registration can be directed to Doug Logan at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5328 or toll free at 1-800-451-6027 extension 4-5328.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

Appendix A: Emission Calculations
PTE Summary

Company Name: Superior Manufacturing, Inc.
Address City IN Zip: 11333 Elberfeld Rd, Elberfeld, IN 47613
Registration Number: 173-34520-00113
Reviewer: Doug Logan
Date: 5/29/14

Uncontrolled Potential to Emit (tons/yr)									
Emission Unit	**PM**	**PM10**	**PM2.5 ***	**SO_2**	**NOx**	**VOC**	**CO**	**CO2e**	**Total HAPs**
Space Heaters	7.75E-03	3.10E-02	3.10E-02	2.45E-03	0.41	2.24E-02	0.34	492	7.70E-03
Welding and Cutting	0.29	0.29	0.29	--	--	--	--	--	1.05E-02
Abrasive Blasting	2.53	2.53	2.53	--	--	--	--	--	--
Surface Coating	10.87	10.87	10.87	--	--	12.12	--	--	10.31
Fugitives	7.45E-02	1.97E-02	2.05E-03	--	--	--	--	--	--
Total	**13.78**	**13.75**	**13.73**	**2.45E-03**	**0.41**	**12.14**	**0.34**	**492**	**10.33**

** PM2.5 listed is direct PM2.5*

Appendix A: Emission Calculations
PTE Summary

Company Name: Superior Manufacturing, Inc.
Address City IN Zip: 11333 Elberfeld Rd, Elberfeld, IN 47613
Registration Number: 173-34520-00113
Reviewer: Doug Logan
Date: 5/29/14

Uncontrolled Potential to Emit (tons/yr)				
Emission Unit	**Natural Gas Combustion**	**Welding**	**Surface Coating**	**Total HAP**
Organic HAPs				
Benzene	8.57E-06			8.57E-06
Dichlorobenzene	4.90E-06			4.90E-06
Formaldehyde	3.06E-04			3.06E-04
n-Hexane	7.34E-03			7.34E-03
Toluene	1.39E-05		0.55	0.55
Xylenes			5.28	5.28
Ethylbenzene			0.96	0.96
MIBK			3.50	3.50
HMI			1.10E-02	1.10E-02
Inorganic HAPs				
Lead	2.04E-06			2.04E-06
Cadmium	4.49E-06			4.49E-06
Chromium	5.71E-06			5.71E-06
Manganese	1.55E-06	1.05E-02		1.55E-06
Nickel	8.57E-06			8.57E-06
Total Emissions	**7.70E-03**	**1.05E-02**	**10.31**	**10.31**

Potential to Emit after Issuance (tons/yr)				
Emission Unit	**Natural Gas Combustion**	**Welding**	**Surface Coating**	**Total HAP**
Organic HAPs				
Benzene	8.57E-06			8.57E-06
Dichlorobenzene	4.90E-06			4.90E-06
Formaldehyde	3.06E-04			3.06E-04
n-Hexane	7.34E-03			7.34E-03
Toluene	1.39E-05		0.55	0.55
Xylenes			5.28	5.28
Ethylbenzene			0.96	0.96
MIBK			3.50	3.50
HMI			1.10E-02	1.10E-02
Inorganic HAPs				
Lead	2.04E-06			2.04E-06
Cadmium	4.49E-06			4.49E-06
Chromium	5.71E-06			5.71E-06
Manganese	1.55E-06	1.05E-02		1.55E-06
Nickel	8.57E-06			8.57E-06
Total Emissions	**7.70E-03**	**1.05E-02**	**10.31**	**10.31**

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Superior Manufacturing, Inc.
Address City IN Zip: 11333 Elberfeld Rd, Elberfeld, IN 47613
Registration Number: 173-34520-00113
Reviewer: Doug Logan
Date: 5/29/14

includes:	Unit	Number	Rating (MMBtu/hr)	Total
	SH1, SH2, SH3	3	0.138	0.414
	SH4, SH5	2	0.268	0.536

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
0.950	1020	8.2

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	7.75E-03	3.10E-02	3.10E-02	2.45E-03	0.41	2.24E-02	0.34

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	8.57E-06	4.90E-06	3.06E-04	7.34E-03	1.39E-05	**7.68E-03**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	2.04E-06	4.49E-06	5.71E-06	1.55E-06	8.57E-06	**2.24E-05**
					Total HAPs	**7.70E-03**
					Worst HAP	**7.34E-03**

Methodology is the same as above.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	490	0.0	0.0
Summed Potential Emissions in tons/yr	490		
CO2e Total in tons/yr	492		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emissions Calculations
Welding and Thermal Cutting

Company Name: Superior Manufacturing, Inc.
Address City IN Zip: 11333 Elberfeld Rd, Elberfeld, IN 47613
Registration Number: 173-34520-00113
Reviewer: Doug Logan
Date: 5/29/14

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Daily Wire Consumption (lb/day)	EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
WELDING				PM=PM10=PM2.5	Mn	Ni	Cr	PM=PM10=PM2.5	Mn	Ni	Cr	
Metal Inert Gas (MIG)(carbon steel)	10	0.48	115.2	0.0055	0.0005	--	--	2.64E-02	2.40E-03	--	--	2.40E-03
Metal Inert Gas (MIG)(aluminum)**	1	0.48	11.52	0.0723	--	--	--	3.47E-02	--	--	--	--
		Total	126.72									
	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick)**				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
FLAME CUTTING				PM=PM10=PM2.5	Mn	Ni	Cr	PM=PM10=PM2.5	Mn	Ni	Cr	
Plasma***	4	0.25	24	0.0039	--	--	--	0.006	--	--	--	--
EMISSION TOTALS												
Potential Emissions lbs/hr								6.67E-02	2.40E-03	--	--	2.40E-03
Potential Emissions lbs/day								1.60	5.76E-02	--	--	5.76E-02
Potential Emissions tons/year								0.29	1.05E-02	--	--	1.05E-02

Methodology:

* Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.

** Emission factor for 5356 alloy from "Welding and Flame Cutting 2-10 Background"

*** Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted). Therefore, the emission factor for plasma cutting Using AWS average values: (0.25 g/min)/(3.6 m/min) x (0.0022 lb/g)/(39.37 in./m) x (1,000 in.) = 0.0039 lb/1,000 in. cut, 8 mm thick

Plasma cutting emissions, lb/hr: (# of stations)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.

Daily Wire Consumption (lb/day) = Number of stations x Max. electrode consumption per station (lb/hr) x 24 (hr/day)

Appendix A: Emission Calculations
Abrasive Blasting

Company Name: Superior Manufacturing, Inc.
Address City IN Zip: 11333 Elberfeld Rd, Elberfeld, IN 47613
Registration Number: 173-34520-00113
Reviewer: Doug Logan
Date: 5/29/14

Source reported: 73500 lb of glass media in one year
2080 hrs operated per year of usage

media usage: 73500 lb / 2080 hr/yr 35.34 lb media/hr

Table 1 - Emission Factors for Abrasives

	Emission Factor (EF)	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft^3)
Al oxides	160
Sand	99
Steel	487

Potential to Emit Before Control

FR = Flow rate of actual abrasive (lb/hr) =	35.34	lb/hr (per nozzle)
w = fraction of time of wet blasting =	0	%
N = number of nozzles =	1	
EF = PM emission factor for actual abrasive from Table 1 =	0.010	lb PM/ lb abrasive
PM10 emission factor ratio for actual abrasive from Table 1 =	1.00	lb PM10 / lb PM
D = Density of abrasive (lb/ft^3) from MSDS provided by source =	161.97	
D1 = Density of sand (lb/ft^3) =	99.00	
EFa adjusted for media density = EF x D/D1 =	0.016	lb PM/ lb abrasive

	PM=PM10=PM2.5	
Potential to Emit (before control) =	**0.58**	**lb/hr**
=	**13.88**	**lb/day**
=	**2.53**	**ton/yr**

Potential to Emit After Control

	PM=PM10=PM2.5	
Emission Control Device Efficiency =	**0.0%**	
Potential to Emit (after control) =	**0.58**	**lb/hr**
=	**13.88**	**lb/day**
=	**2.53**	**ton/yr**

METHODOLOGY
This estimate assumes PM=PM10=PM2.5 because there is no size adjustment factor in Table 1 for crushed glass media
Abrasive flow rate determined from data provided by source: 73,500 (lb media/yr) / 2,080 (hr/yr) = 35.34 (lb media/hr)
Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Potential to Emit (before control) = EF x FR x (1 - w/200) x N (where w should be entered in as a whole number (if w is 50%, enter 50))
Potential to Emit (after control) = [Potential to Emit (before control)] * [1 - control efficiency]
Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: Superior Manufacturing, Inc.
Address City IN Zip: 11333 Elberfeld Rd, Elberfeld, IN 47613
Registration Number: 173-34520-00113
Reviewer: Doug Logan
Date: 5/29/14

Material	Product Number	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)*	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Primer Part A	B58W610	12.19	17.31%	0.0%	17.3%	0.0%	71.00%	3.11	0.051	2.11	2.11	0.33	8.04	1.47	3.50	2.97	50%
Primer Part B	B58V600	13.46	12.11%	0.0%	12.1%	0.0%	76.00%	3.11	0.051	1.63	1.63	0.26	6.21	1.13	4.11	2.14	50%
Primer Reducer #15	R7K15	6.91	100.00%	0.0%	100.0%	0.0%	0.00%	0.78	0.051	6.91	6.91	0.27	6.58	1.20	0.00	--	50%
Primer cleanup	R7K15	6.91	100.00%	0.0%	100.0%	0.0%	0.00%	1.50	0.051	6.91	6.91	0.53	12.69	2.32	0.00	--	50%
Red Topcoat	B65R338	10.68	22.19%	0.0%	22.2%	0.0%	66.00%	3.33	0.051	2.37	2.37	*0.40*	*9.67*	*1.76*	*3.09*	3.59	50%
Black Topcoat	B65B311	9.72	25.21%	0.0%	25.2%	0.0%	65.00%	3.33	0.051	2.45	2.45	**0.42**	**10.00**	**1.82**	**2.71**	3.77	50%
Topcoat Activator	B60V30	8.44	29.38%	0.0%	29.4%	0.0%	64.00%	0.83	0.051	2.48	2.48	0.11	2.53	0.46	0.55	3.87	50%
Topcoat Reducer #58***	530-K58	7.28	100.00%	0.0%	100.0%	0.0%	0.00%	0.83	0.051	7.28	7.28	**0.31**	**7.43**	**1.36**	0.00	--	50%
Topcoat Reducer #69	530-K69	7.04	100.00%	0.0%	100.0%	0.0%	0.00%	0.83	0.051	7.04	7.04	*0.30*	*7.18*	*1.31*	0.00	--	50%
Topcoat cleanup	530-K69	7.04	100.00%	0.0%	100.0%	0.0%	0.00%	1.50	0.051	7.04	7.04	0.54	12.93	2.36	0.00	--	50%

Total Potential to Emit **Add worst case coating to all solvents** **Uncontrolled** **2.77** **66.39** **12.12** **10.87**
Controlled **95% control efficency** **0.54**

Notes:
Primer requires an average 4 hr drying time before recoat and topcoat requires 8 hr drying time to handle according to manufacturer's technical data sheets.
Painting cycle time is: (7 gal primer/trailer / 2 gal primer/hr) + 4 hr/trailer dying + (5 gal topcoat/trailer / 1.25 gal topcoat/hr) + 8 hr/trailer drying = 19.5 hr/trailer
* Maximum units per hour is 1/19.5 = 0.051 trailer/hr
** Transfer efficiency for air atomized spray, large flat surface, from AP-40
*** Reducer #58, the warm weather reducer, is the worst-case choice for VOC PTE, black topcoat is worst-case for VOC, red topcoat is worst-case for particulate.
Worst-case values shown in **bold** type included in column totals, lower-emission alternates shown in *italic* type not included in column totals.

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

VOC per gallon as apllied for 326 IAC 8-2-9

Primer: 3.11 gal x 2.11 lb VOC/gal + 3.11 gal x 1.63 lb VOC/gal + 0.78 gal x 6.91 lb VOC/gal = 2.43 lb VOC/gal
(3.11 gal + 3.11 gal + 0.78 gal)

Red topcoat: 3.33 gal x 2.37 lb VOC/gal + 0.42 gal x 2.48 lb VOC/gal + 0.42 gal x 7.28 lb VOC/gal = 2.87 lb VOC/gal
(3.33 gal + 0.42 gal + 0.42 gal)

Black topcoat: 3.33 gal x 2.45 lb VOC/gal + 0.42 gal x 2.48 lb VOC/gal + 0.42 gal x 7.28 lb VOC/gal = 2.94 lb VOC/gal
(3.33 gal + 0.42 gal + 0.42 gal)

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: Superior Manufacturing, Inc.
Address City IN Zip: 11333 Elberfeld Rd, Elberfeld, IN 47613
Registration Number: 173-34520-00113
Permit Reviewer: Doug Logan
Date: 5/29/14

Material	Product Number	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)*	Weight % Toluene	Weight % Ethylbenzene	Weight % Xylene	Weight % MIBK	Weight % HMI	Toluene (ton/yr)	Ethylbenzene (ton/yr)[1]	Xylene (ton/yr)	MIBK (ton/yr)	HMI (ton/yr)	Combined HAPs (ton/yr)
Primer Part A	B58W610	12.19	3.11	0.051	0%	3.00%	15.00%	0%	0%	0	0.25	1.27	0	0	1.52
Primer Part B	B58V600	13.46	3.11	0.051	0%	0.30%	2.00%	10.00%	0%	0	2.81E-02	0.19	0.94	0	1.15
Primer Reducer #15	R7K15	6.91	0.78	0.051	0%	8.00%	44.00%	48.00%	0%	0	0.10	0.53	0.58	0	1.20
Primer cleanup	R7K15	6.91	1.50	0.051	0%	8.00%	44.00%	48.00%	0%	0	0.19	1.02	1.11	0	2.32
Red Topcoat	B65R338	10.68	3.33	0.051	0%	0.20%	1.00%	0%	0%	0	1.59E-02	7.95E-02	0	0	9.54E-02
Black Topcoat	B65B311	9.72	3.33	0.051	0%	0.70%	4.00%	0%	0%	0	5.07E-02	0.29	0	0	0.34
Topcoat Activator	B60V30	8.44	0.83	0.051	0%	0%	0%	0%	0.70%	0	0	0	0	1.10E-02	1.10E-02
Topcoat Reducer #58***	530-K58	7.28	0.83	0.051	0%	7.00%	42.00%	0%	0%	0	*0.09*	*0.57*	0	0	*0.66*
Topcoat Reducer #69	530-K69	7.04	0.83	0.051	15%	9.00%	52.00%	24.00%	0%	0.20	**0.12**	**0.68**	0.31	0	**1.31**
Topcoat cleanup	530-K69	7.04	1.50	0.051	15%	9.00%	52.00%	24.00%	0%	0.35	0.21	1.23	0.57	0	2.36
Total Potential to Emit										**0.55**	**0.96**	**5.28**	**3.50**	**1.10E-02**	**10.31**

Notes:
* Maximum units per hour based on 19.5 hr cycle for primer and topcoat, see note in "coating" tab
** Worst-case choice for HAP emissions for topcoat reducers shown in **bold** type, lower emissions choice shown in *italic* type not included in column totals

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emission Calculations
Fugitive Dust from Vehicle Travel

Company Name: Superior Manufacturing, Inc.
Address City IN Zip: 11333 Elberfeld Rd, Elberfeld, IN 47613
Registration Number: 173-34520-00113
Reviewer: Doug Logan
Date: 5/29/14

Data from the source:

Weekly Delivery/Production Traffic					
	# of Deliveries	Avg. weight (lb)	Maximum Distance (ft)		# veh x distance for weighted average
			Paved	Unpaved	
UPS Deliveries	5	16000	380	0	80000
Uniform Delivery	1	16000	380	0	16000
Welding Supplies	1	28000	380	384	28000
Steel Delivery	1	57000	380	384	57000
Add. Inventory Supply	5	57000	380	384	285000

	Average Vehicle Weight (lb)	Maximum Travel Distance (mi)	Trips per Day
Paved	35,846	0.072	1.86
Unpaved	52,857	0.073	1.00

Methodology:
Average vehicle weight (lb) = Σ (# of deliveries x ave. weight) / Σ (# of deliveries)
Trips per day = Σ (# of deliveries) / 7 (days/week)
independent calculations made for paved and unpaved road traffic

Paved Roads Emission Calculations (PTE)
AP-42 Chapter 13.2.1 (1/11)

Uncontrolled Emission Factor (lb/VMT^a) = $k\ (sL)^{0.91}\ W^{1.02}$ (AP-42, Chapter 13.2.1, Eqn 1)
where k = particle size multiplier (lb/VMT)
sL = road surface silt loading (g/m^2), Tbl 13.2.1-2, <500 vehicles daily
W = average weight (tons) of the vehicles traveling on the road

Constants[b]		
PM	PM_{10}	$PM_{2.5}$
k (lb/VMT)	k (lb/VMT)	k (lb/VMT)
0.011	0.0022	0.00054

W (tons)	sL[c]	Travel Distance (miles)	Trips/Day	VMT/Year	PM Emission Factor (lb/VMT)	PM_{10} Emission Factor (lb/VMT)	$PM_{2.5}$ Emission Factor (lb/VMT)	Uncontrolled PM Emissions (US tons/yr)	Uncontrolled PM_{10} Emissions (US tons/yr)	Uncontrolled $PM_{2.5}$ Emissions (US tons/yr)
17.92	0.6	0.072	2	49	0.13	0.03	0.01	3.20E-03	6.40E-04	1.57E-04

Notes:
a. VMT is vehicle miles traveled
b. AP-42 Section 13.2.1, Table 13.2.1-1, PM_{30} chosen as surrogate for PM
c. AP-42 Section 13.2.1, Table 13.2.1-2, ubiquitous baseline for < 500 vehicles per day

Methodology:
VMT/Year = Travel distance (miles) x Trips per Day x 365 Days per year
Emissions (US tons/yr) = VMT/yr x EF (lb/VMT) / 2000 (lb/US ton)

Unpaved Roads Emission Calculations (PTE)
AP-42 Chapter 13.2.2 (11/06)

Unmitigated Emission Factor (lb/mile) = [k * (s/12)^a * (W/3)^b] (AP-42, Chapter 13.2.2, Equation 1a)
where k = particle size multiplier (lb/VMT)
s = surface material silt content (%), Table 13.2.2-1
Mean value of 6% for iron and steel production chosen as representative of industries other than mining and mineral processing
W = average weight (tons) of the vehicles traveling on the road (same as above)
a = constant, see table below
b = constant, see table below

Constants[e]								
PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$
k (lb/VMT)	k (lb/VMT)	k (lb/VMT)	a	a	a	b	b	b
4.9	1.5	0.15	0.7	0.9	0.9	0.45	0.45	0.45

W (tons)	s	Travel Distance (miles)	Trips/Day	VMT/Year	PM Emission Factor (lb/VMT)	PM_{10} Emission Factor (lb/VMT)	$PM_{2.5}$ Emission Factor (lb/VMT)	Uncontrolled PM Emissions (tons/yr)	Uncontrolled PM_{10} Emissions (tons/yr)	Uncontrolled $PM_{2.5}$ Emissions (tons/yr)
26.43	6.0	0.073	1	27	8.03	2.14	0.21	0.11	2.84E-02	2.84E-03

Notes:
e AP-42 Section 13.2.2, Table 13.2.2-2

Methodology:
Miles/Year = Travel Distance (miles) x Trips per Day x 365 Days per year
Emissions (US tons/yr) = VMT/yr x EF (lb/VMT) / 2000 (lb/US ton)

Potential to Emit After Natural Mitigation from Precipitation:

Methodology:
Paved roads, multiply uncontrolled PTE by (1 - P/4N), Eqn 2, Sec 13.2.1
Unpaved roads, multiply uncontrolled PTE by (1 - P/365), Eqn 2, Sec 13.2.2

	Mitigated PM Emissions (tons/yr)	Mitigated PM_{10} Emissions (tons/yr)	Mitigated $PM_{2.5}$ Emissions (tons/yr)
Paved	2.94E-03	5.88E-04	1.44E-04
Unpaved	7.15E-02	1.91E-02	1.91E-03
Total	**7.45E-02**	**1.97E-02**	**2.05E-03**

Where: P= 120 = number of days per year with precipitation > 0.01 inch, Figure 13.2.2-1
N = 365 days per year

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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TO: Brad Lattner
Superior Manufacturing, Inc.
11333 Elberfeld Road
Elberfeld, IN 47613

DATE: June 19, 2014

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Registration
173-34520-00113

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Pamela Block, Air Quality Services, LLC
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Mail Code 61-53

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2		Warrick County Board of Commissioners 107 W. Locust Street Suite # 301 Boonville IN 47601-0585 *(Local Official)*									
3		Boonville Town Council P.O. Box 585 Boonville IN 47601 *(Local Official)*									
4		Warrick County Health Department 107 W Locust, Suite 204 Boonville IN 47601-1701 *(Health Department)*									
5		Elberfeld Town Council P.O. Box 37, 175 Sycamore Street Elberfeld IN 46713 *(Local Official)*									
6		Mr. Don Mottley Save Our Rivers 6222 Yankeetown Hwy Boonville IN 47601 *(Affected Party)*									
7		Ms. Pamela Block Air Quality Services, LLC 425 Main Street Evansville IN 47708 *(Consultant)*									
8		Kim Sherman 3355 Woodview Drive Newburgh IN 47630 *(Affected Party)*									
9		Mr. Mark Wilson Evansville Courier & Press P.O. Box 268 Evansville IN 47702-0268 *(Affected Party)*									
10		Mr. Bil Musgrove PO Box 520 Chandler IN 47610 *(Affected Party)*									
11		David Boggs 216 Western Hills Dr Mt Vernon IN 47620 *(Affected Party)*									
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